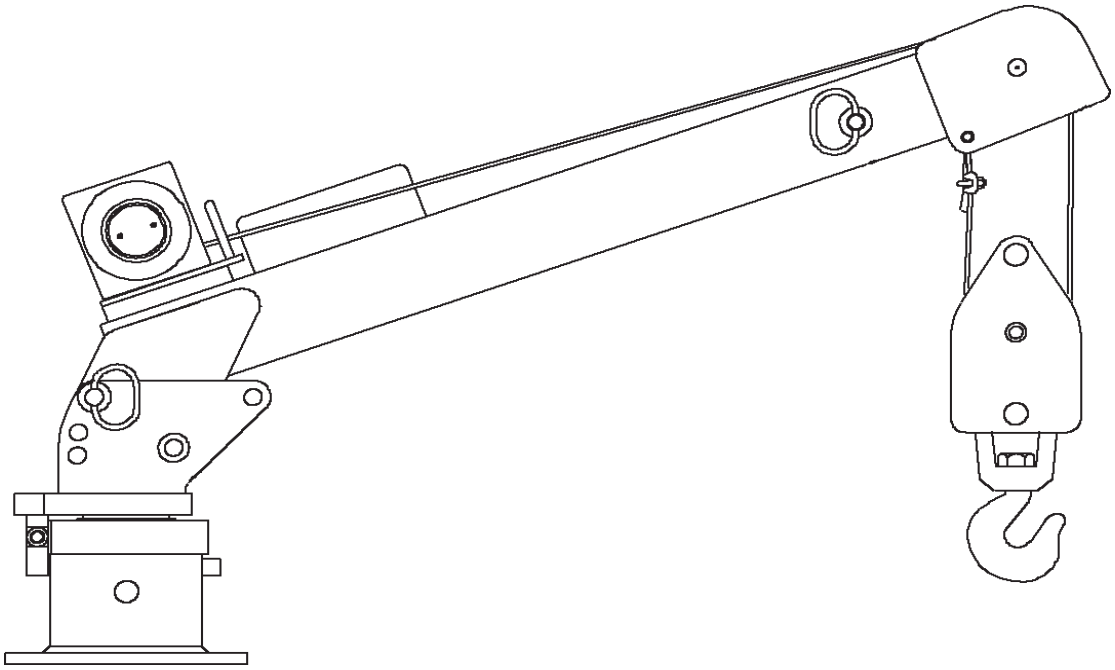
0000WS65:99900663: 20061106

WorkSaver™ 65

Volume 2 - PARTS AND SPECIFICATIONS

Section 1 SPECIFICATIONS
Section 2 CRANE DESCRIPTION
Section 3 INSTALLATION
Section 4 OPERATION
Section 5 PARTS
Section 6 MAINTENANCE



IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711

MANUAL PART NUMBER 99900663

Iowa Mold Tooling Co., Inc. is an Oshkosh Truck Corporation company.

0000WS65:99900663: --------

REVISIONS LIST

DATE	LOCATION	DESCRIPTION OF CHANGE
20010213	5-02	ecn9000-41710972-1/2-13 HEX NUT WAS JAM NUT
20011018	1-2, 5-9 through 5-11 6-1, 6-3	Removed electrically operated worm gear option from manual. Not an option.
20030611	1-2	Removed 1-7 - Options (included pedestal mount, worm gear.) NOTE - option no longer available after August 1995.
20060321	5-2	ECN 10001 - Changed mast assembly 41710972.
20061106	1-1, 5-1	NEW OWNERSHIP STATEMENT; UPDATED SERIAL TAG LOCATION INFO.

-READ FIRST-
SAFETY PRECAUTIONS

Read and understand the IMT Operator's Crane Safety Manual before operation of the crane.

DO NOT exceed crane capacity.

Before attempting full capacity lifts, practice with light loads to familiarize yourself with crane operation and controls. Also, observe tilt and effects on the carrier vehicle's body during loading.

Remove the remote control cable from the crane when the crane is left unattended, even for short time periods.

The remote control cable must be kept away from the crane to avoid entanglement. Be certain never to allow the cable to be crushed by any outrigger or crimped between anything.

DO NOT use winch when crane is in the stored position.

When winding cable onto the winch, apply tension to the cable to keep it straight.

DO NOT wrap wire rope around the load. Use chains or hooks designed for the job.

Continuous use of the crane winch should be avoided to prevent overheating of the electric motor.

Check the crane hook for cracks and distortion, and safety latch for function, prior to work each day.

The safety latch of the hook must be closed before lifting a load.

A heavy-duty battery of 85 ampheres or more is recommended.

The vehicle must be on a level surface for crane operation.

Raise load no higher than required to perform the lift.

Lubricate as required - regularly.

The vehicle's emergency brake must be set prior to crane operation.

Load ratings are based on crane capacity, not unit stability.

NEVER operate the crane near electrically charged power lines or other sources of electricity.

The path of the crane must be clear of all personnel and obstructions.

DO NOT permit cable to be totally unwrapped from drum. There should be no less than 3 wraps of cable on the drum during operation.

DO NOT weld, modify, or use unauthorized parts. This can result in crane failure, causing serious injury or death.

ALWAYS store the outriggers and crane properly before moving the carrier vehicle.

DO NOT permit unecessary objects to be in the vicinity of the crane during operation.

The carrier vehicle must meet minimum chassis specifications but these specifications do not guarantee unit stability.

The crane must be installed per IMT specifications. Consult your local distributor or IMT for any required information.

Outriggers must be used to stabilize the vehicle whenever the crane is in use.

Outriggers must be positioned correctly on a firm surface.

Read and familiarize yourself with the IMT OPERATOR'S CRANE SAFETY MANUAL before operating or performing any maintenance on your crane.

NOTES

TABLE OF CONTENTS

PARAGRAPH	TITLE	PAGE
Section 1.	**SPECIFICATIONS**	
1-1.	GENERAL	1-1
1-2.	LIFTING CAPACITY	1-1
1-3.	PERFORMANCE CHARACTERISTICS	1-1
1-4.	POWER SOURCE	1-1
1-5.	WINCH	1-1
1-6.	CONTROLS	1-2
1-7.	OPTIONS	1-2
Section 2.	**CRANE DESCRIPTION**	
2-1.	GENERAL	2-1
2-2.	BASE	2-1
2-3.	MAST	2-1
2-4.	LOWER BOOM	2-1
2-5.	WINCH ASSEMBLY	2-1
2-6.	ELECTRICAL ASSEMBLY	2-1
2-7.	OUTRIGGERS	2-1
Section 3.	**INSTALLATION**	
3-1.	GENERAL	3-1
3-2.	INSTALLATION	3-1
Section 4.	**OPERATION**	
4-1.	GENERAL	4-1
4-2.	INSPECTION	4-1
4-3.	JOB SET-UP	4-1
4-4.	PERFORMING A LIFT	4-1
4-5.	STORING THE CRANE	4-2
Section 5.	**PARTS**	
5-1.	GENERAL	5-1
5-2.	CRANE IDENTIFICATION	5-1
5-3.	WELDMENT IDENTIFICATION	5-1
5-4.	ORDERING REPAIR PARTS	5-1
Section 6.	**MAINTENANCE**	
6-1.	GENERAL	6-1
6-2.	LUBRICATION	6-1
6-3.	WIRE ROPE REPLACEMENT	6-1
6-4.	CRANE ELECTRICAL	6-2
6-5.	VEHICLE ELECTRICAL	6-2
6-6.	CLEANLINESS	6-2

LIST OF ILLUSTRATIONS

FIGURE	TITLE	PART NUMBER	PAGE
A-1.	CAPACITY CHART		1-2
A-3.	GEOMETRIC CONFIGURATION - 5' VERSION		1-3
A-4.	GEOMETRIC CONFIGURATION - 7' VERSION		1-4
B-1.	CRANE COMPONENTS		2-2
C-1.	MOUNTING DIMENSIONS		3-1
C-2.	MOUNTING HARDWARE		3-1
D-1.	HOOK SAFETY LATCH		4-2
D-2.	BOOM POSITIONING DIAGRAM - 5' VERSION		4-3
D-3.	BOOM POSITIONING DIAGRAM - 7' VERSION		4-3
D-4.	STORED POSITION - TALL BASE MODELS		4-4
E-1.	SERIAL NUMBER PLACARD		5-1
E-2.	WELDMENT PART NUMBER LOCATIONS		5-1
E-3.	BASE WELDMENTS		5-2
E-4.	MAST ASSEMBLY - 5' & 7' VERSIONS	41710972	5-2
E-5.	LOWER BOOM ASSEMBLY - 5' VERSION	41711029	5-3
E-6.	LOWER BOOM ASSEMBLY - 7’VERSION	41711028	5-4
E-7.	WINCH ASSEMBLY	31711022	5-5
E-8.	HOOK BLOCK ASSEMBLY	51711010	5-5
E-9.	ELECTRICAL ASSEMBLY - MANUAL SWING	41711170	5-6
E-10.	DECAL KIT	95711049	5-7
E-11.	OUTRIGGER ASSEMBLY - DROP LEG	41711109	5-8
E-12.	OUTRIGGER ASSEMBLIES		5-8
F-1.	MAINTENANCE POINTS		6-3
F-2.	TORQUE DATA CHART		6-4

Section 1. SPECIFICATIONS
WorkSaver ™ 65

1-1. GENERAL SPECIFICATIONS

	5' VERSION	7' VERSION
CRANE RATING	6500 ft-lbs (0.899 ton-meters)	6500 ft-lbs (0.899 ton meters)
MAXIMUM HORIZONTAL REACH from centerline of rotation	5'-2" (1.57m)	7'-1" (2.16m)
MANUAL BOOM EXTENSION boom +20°(.349 rad.) above horizontal	3'-3" to 5'-2" (.99 to 1.57m)	4'-3" to 7'-1" (1.30 to 2.16m)
LIFTING HEIGHT from base of crane with tall base	8'-10" (2.69m)	11'-9" (3.58m)
CRANE WEIGHT (tall base)	220 lbs (99.8 kg)	260 lbs (117.9 kg)
CRANE WEIGHT (short base)	160 lbs (72.6 kg)	180 lbs (90.7 kg)
CRANE STORAGE HT. (tall base)	46" (1.17m)	59.5" (1.51m)
CRANE STORAGE HT. (short base)	31" (0.79m)	34" (0.86m)
MOUNTING SPACE REQUIRED FOR BASE PLATE	10" x 10" (25.4 x 25.4cm)	10" x 10" (25.4 x 25.4cm)
MOUNTING BOLT PATTERN CENTER TO CENTER	8" x 8" (20.3 x 20.3cm)	8" x 8" (20.3 x 20.3cm)

1-2. LIFTING CAPACITY

from centerline of rotation with boom +20° (.35 rad.) above horizontal.

3'-3" (.99m)	2000 lbs (907.2 kg)	—
4'-3" (1.30m)	1540 lbs (698.5 kg)	1540 lbs (698.5 kg)
5'-2" (1.57m)	1260 lbs (571.5 kg)	1260 lbs (571.5 kg)
6'-2" (1.89m)	—	1050 lbs (476.3 kg)
7'-1" (2.16m)	—	920 lbs (417.3 kg)

1-3. PERFORMANCE CHARACTERISTICS

ROTATION (manual with lock)	346° (6.04 rad)	346° (6.04 rad)
LOWER BOOM ELEVATION (4 manually pinned locations)	-90° (-1.57 rad) stowed +20° (.35 rad) +40° (.70 rad) +60° (1.05 rad)	-90° (-1.57 rad) stowed +20° (.35 rad) +40° (.70 rad) +60° (1.05 rad)
EXTENSION BOOM (manual pull-out)	23" (58.4cm)	34" (86.4cm)

1-4. POWER SOURCE

12VDC chassis must have minimum 50-amp alternator. Chassis battery must be deep cycle with a minimum of 80 amp/hour rating and 450 cold cranking amp capacity.

1-5. WINCH

The winch is powered by 12VDC supplied by the chassis battery to a 12VDC motor through a planetary gear drive. Maximum current draw under 2000 lbs (907 kg) double-line load is 95 amps. Minimum effective double-line winch capacity is 2000 lbs (907 kg). Maximum effective single-line capacity is 1000 lbs (454 kg). Maximum single-line speed under no load is 16 feet/minute (4.88 meters/minute) at a current draw of 20 amps and 5.5 feet/minute (1.67 meters/minute) under 2000 lbs (907 kg) load.

The winch is equipped with 25 feet (7.62m) of 3/16 inch (0.48cm) 7 x 19 class extra-flexible galvanized "aircraft" cable with minimum breaking strength of 4200 lbs (190.5 kg). A snatch block with hook and safety latch are included.

1-6. CONTROLS

Remote control with a 10'-0" (3.05m) detachable control cable. The included battery cable is 25' (7.62m) in length.

IMT reserves the right to change specifications and design without notice.

IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711

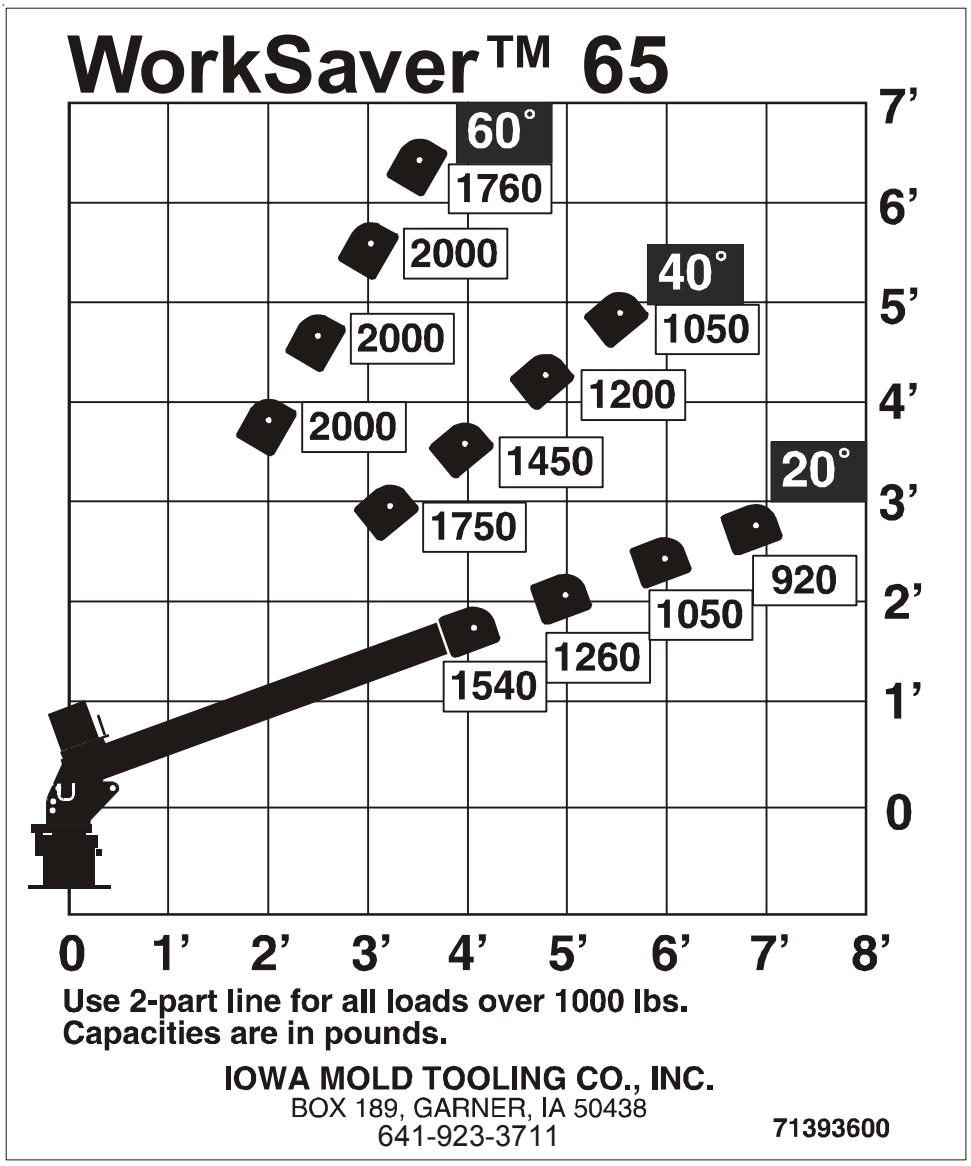


Figure A-1. CAPACITY CHART

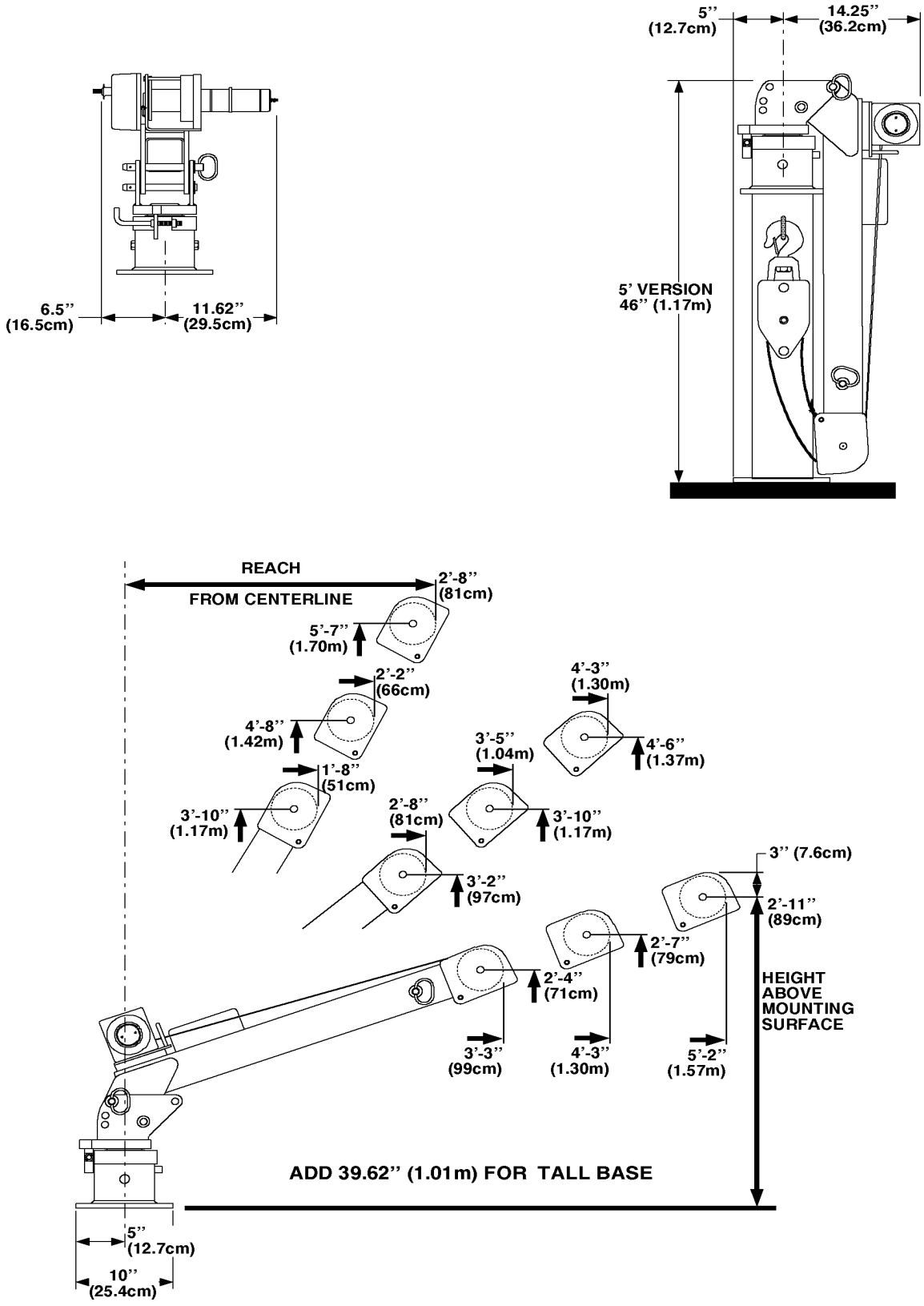


Figure A-3. GEOMETRIC CONFIGURATION-5' VERSION

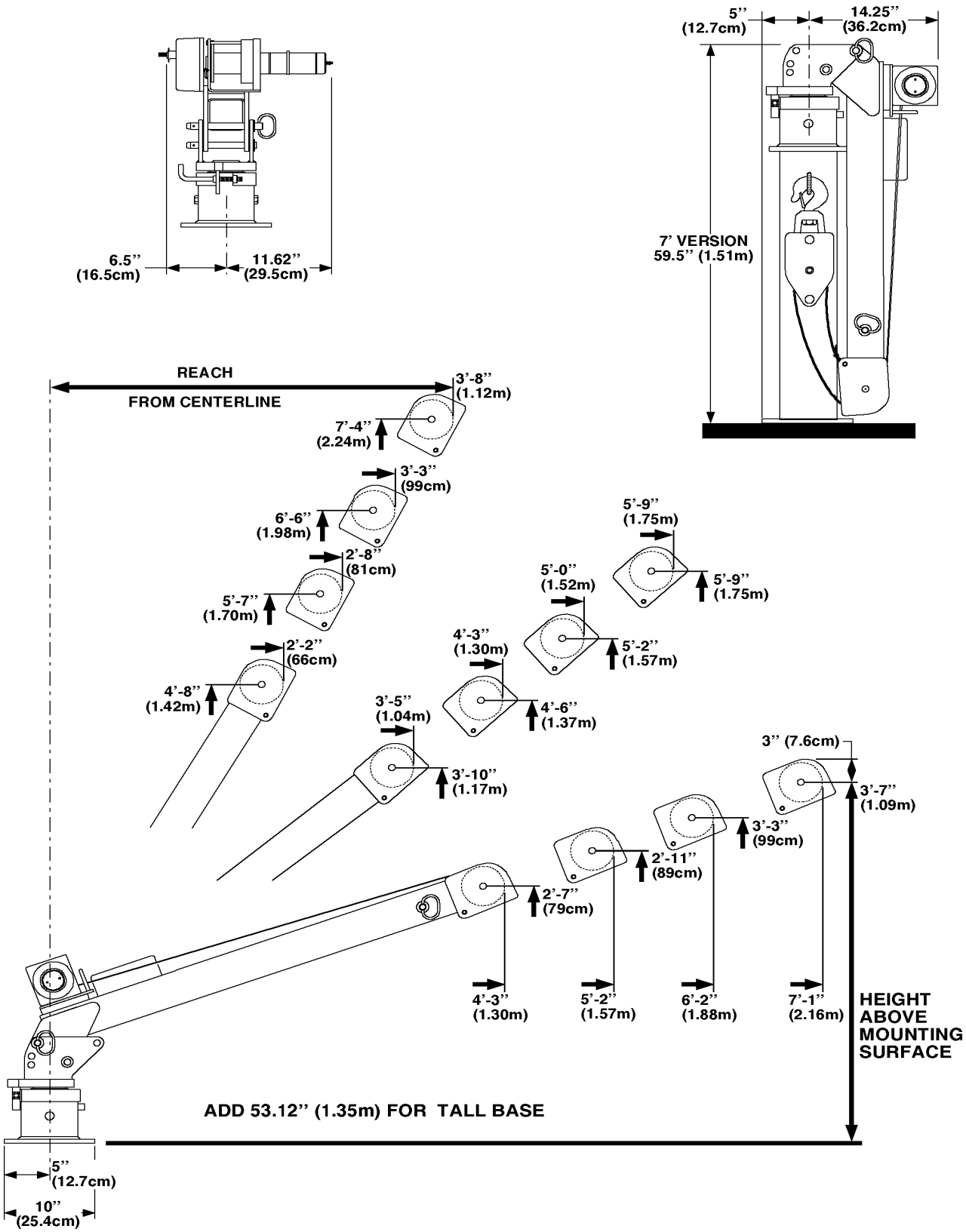


Figure A-4. GEOMETRIC CONFIGURATION-7' VERSION

Section 2. CRANE DESCRIPTION

2-1. GENERAL

This section describes the assemblies that make up the IMT WorkSaver™ 65. Figure B-1 illustrates the locations of the assemblies, as well as various other components of the crane.

2-2. BASE

The base provides the means for mounting the crane to the carrier vehicle. There are three versions which vary in height. The standard base provides for a folded sorage position and is 39.62'' (1.01m) high on the 5' version and 53.12'' (1.35m) on the 7' version. A short pedestal base is optional and available for both 5' and 7' versions and is 6.25'' (15.9cm) high.

2-3. MAST

The standard mast, for both the 5' and 7' versions, incorporates a manually operated swing and locking mechanism with rotation capabilities of 346° (6.04 rad.). An optional electrically operated worm gear rotation mechanism is available. It is controlled by a switch on the remote control handle and also provides 346° (6.04 rad.) rotation.

2-4. LOWER BOOM

The standard lower boom assembly provides for a horizontal reach from centerline of rotation of 3'-3" to 5'-2" (.99 to 1.57m) The optional lower boom assembly provides for a reach of 4'-3" to 7'-1" (1.30 to 2.16m). This is accomplished through the use of a manually operated extension boom stored within the lower boom. The lower boom also provides mounting brackets for the winch and control box, and necessary locking pins. The extension boom includes mounting location for the sheave.

2-5. WINCH ASSEMBLY

The winch assembly includes the electric winch, sheave, hook block and mounting hardware. The winch is powered by the carrier vehicle's 12VDC electrical system.

2-6. ELECTRICAL ASSEMBLY

The electrical assembly includes the necessary 12VDC controls and wiring for operation of the winch.

2-7. OUTRIGGERS

Various manually operated outrigger assemblies are available, dependent on chassis selection. These assemblies are illustrated in the parts section.

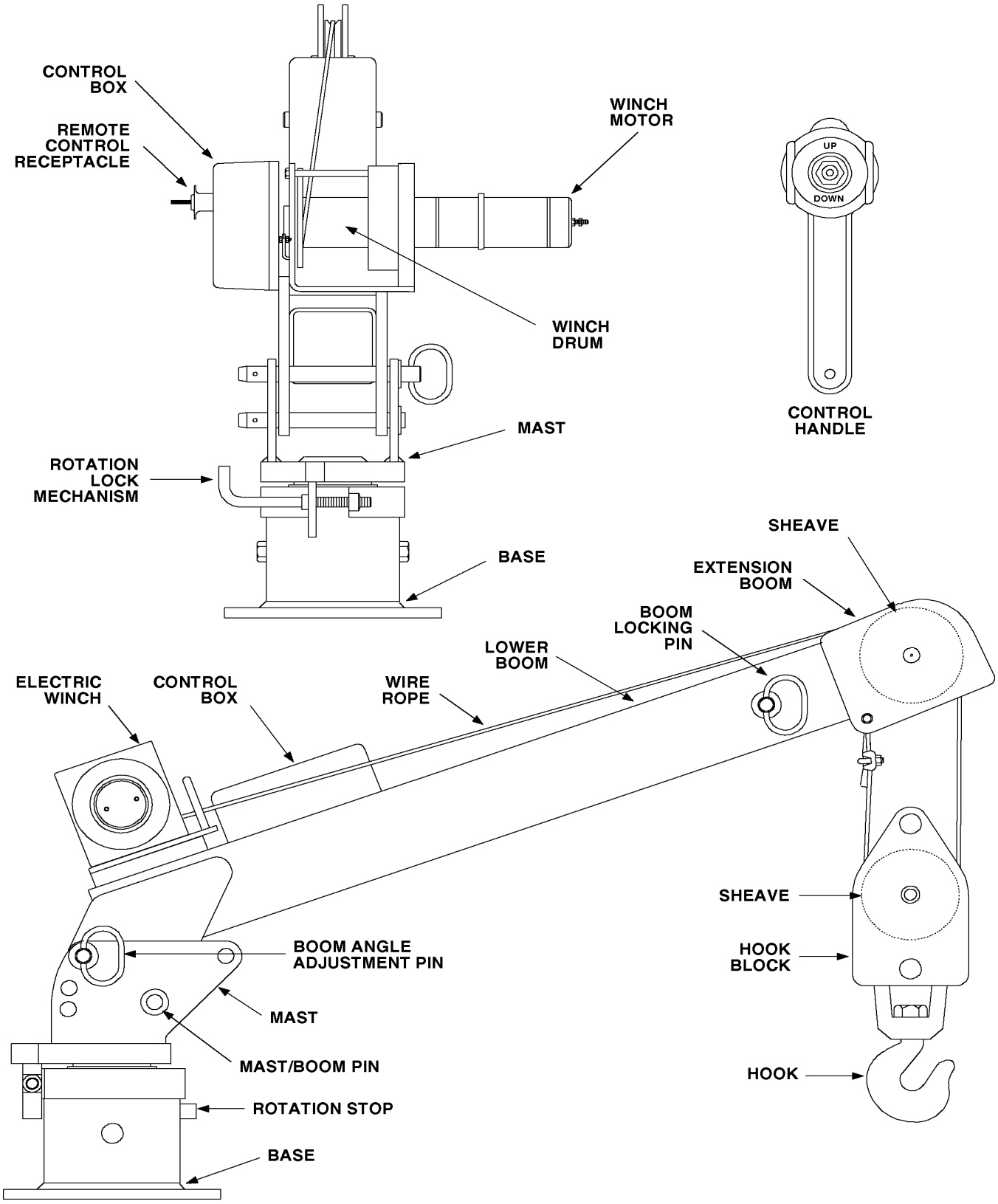


Figure B-1. CRANE COMPONENTS

Section 3. INSTALLATION

3-1. GENERAL

This section provides installation instructions for the IMT WorkSaver™ Crane. See Figure E-9 for specific winch remote control wiring for cranes with manual swing and Figure E-14 for those with power swing.

3-2. INSTALLATION

The mounting space required for the crane base is 10" x 10" (25.4 x 25.4cm) with a square bolt hole pattern measuring 8" x 8" (20.3 x 20.3cm). Before determining the location for mounting, keep in mind that the 5' version crane has a horizontal reach from centerline of rotation of 62" (1.57m) and the 7' version has a reach of 85" (2.16m). Also important is that the crane has a 346° (6.04 rad) rotation capability.

Using the holes in the base as a pattern, mark the location of the four mounting holes as well as the inside electrical access hole. Drill 11/16" diameter holes at these five (5) locations. See Figure C-1.

CAUTION

BEFORE DRILLING MOUNTING HOLES, CHECK BELOW THE MOUNTING SURFACE FOR ANY OBSTRUCTIONS, FUEL LINES, EXHAUST OR ELECTRICAL COMPONENTS.

Locate the base with the rotation stop positioned for your particular application which is normally away from the most used working position. Secure the base to the mounting surface using four (4) 5/8-11, hex head, grade 5, cap screws; eight (8) 5/8" flat washers and four (4) 5/8-11 self-locking, hex nuts. See Figure C-2.

After securing the base in position, feed the two wires from the end of the mast through the electrical access hole. Place the mast assembly into the base, being careful not to pinch the wires.

Once the crane is in place, run the positive feed wire, with circuit breakers, along the truck frame and connect to the starter side of the starter solenoid. Secure this wire to the truck frame using cable clamps at approximately 18" (45cm) intervals. The negative lead wire must be connected to a good ground on the truck frame. Prepare the ground location by sanding all paint or rust down to bare metal for maximum ground contact. Secure this wire to the truck frame using cable clamps at 18" (45cm) intervals.

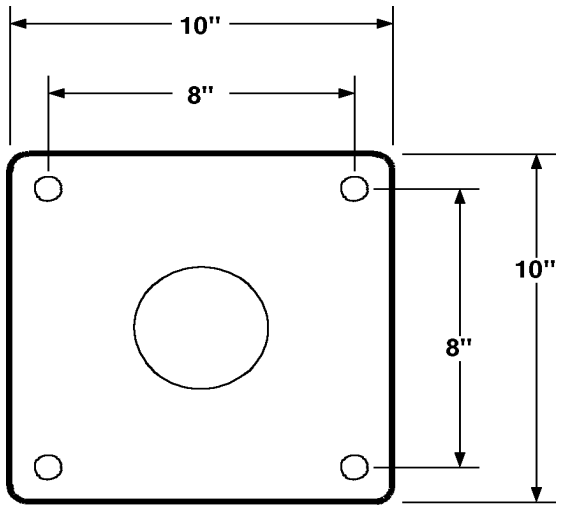


Figure C-1. MOUNTING DIMENSIONS

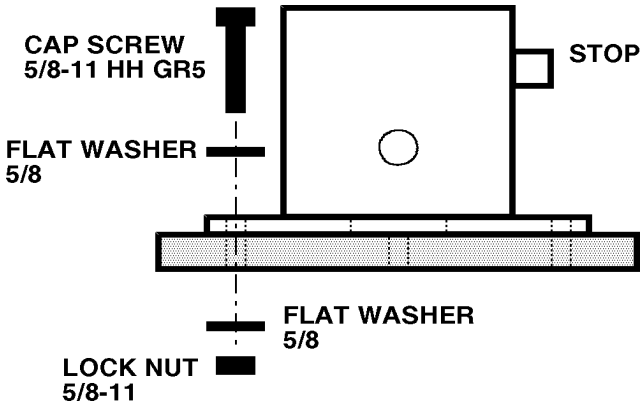


Figure C-2. MOUNTING HARDWARE

NOTES

Section 4. OPERATION

4-1. GENERAL

This section describes set-up, general operation and storage procedures. It is the operator's responsibility to familiarize himself with these procedures and conform to safety standards as specified in the IMT Operator's Crane Safety Manual and any Federal, State or local codes.

4-2. INSPECTION

An inspection of the crane and vehicle should be performed daily, before the crane is used. Visually inspect the crane for:

- **STRUCTURAL DAMAGE**
- **LOOSE PARTS**
- **MOUNTING BOLT TIGHTNESS**
- **HOOK DEFORMATION/CRACKS**
- **WIRE ROPE DEFORMATIONS**
- **ELECTRICAL SYSTEM MOISTURE**
- **PROPER ELECTRICAL CONTACTS**
- **PROPER LUBRICATION**
- **SHEAVES & DRUM FOR CRACKS/WEAR**

Visually inspect the vehicle for:

- **UNDER-INFLATED TIRES**
- **WORN/UNSAFE TIRES**
- **BROKEN SPRINGS/SUSPENSION**
- **FULLY CHARGED BATTERY**
- **SECURE PARKING BRAKE**

Any defects found or suspected should be reported and corrected immediately.

4-3. JOB SET-UP

Before operation, position the crane so the load can be handled easily without obstructions and within specified range of crane. The vehicle must be parked on a firm, level surface.

WARNING

THE PRESENCE OF ANY ELECTRICALY CHARGED POERLINES IS TO BE AVOIDED. FAILURE TO DO SO WILL RESULT IN SERIOUS INJURY OR DEATH. CONSULT THE IMT OPERATOR'S CRANE SAFETY MANUAL FOR FURTHER INFORMATION.

Engage the emergency brake, turn the ignition OFF and place the transmission in PARK (on automatic transmissions).

With the vehicle secured, extend the outriggers so they are positioned on a firm surface and locked into position.

Remove the control handle/cable from its storage container and plug it into the receptacle at the left side of the lower boom.

WARNING

DO NOT ALLOW PERSONNEL WITHING 10 FEET OF ANY PORTION OF AN OPERATING CRANE.

Turn rotation locking handle on mast counterclockwise to release tension on base. Manually rotate crane to a position where the boom can be manipulated and tighten locking handle by turning clockwise. On the optional power swing model, rotate the crane by using the appropriate switch on the remote control handle.

Position the boom at either of its positions above horizontal. Physically lift the boom and insert the quick release pin into position (20°, 40° or 60°) as shown in Figure D-2 or D-3.

To extend the boom, unwind a few feet of cable from the winch and pull the extension boom out to line-up the desired extension boom pin hole with that in the lower boom. Insert the extension boom pin.

WARNING

DO NOT PULL EXTENSION BOOM COMPLETELY OUT OF LOWER BOOM AS IT CAN CAUSE SERIOUS PERSONAL INJURY IF DROPPED.

The crane is now in the work position.

4-4. PERFORMING A LIFT

First, know the weight of the load being lifted and that that load is within the capacity of the crane.

WARNING

NEVER EXCEED THE CRANE'S RATED LOAD CAPACITIES. DOING SO WILL CAUSE STRUCTURAL DAMAGE AND DAMAGE TO THE WINCH AND CABLE WHICH CAN LEAD TO SERIOUS INJURIES OR DEATH.

Position the hook block directly over the load by rotating the crane. Lower the hook block by pressing the control switch DOWN until the hook can be attached to a sling or other suitable handling device which is securely attached to the load. The sling must be captivated by the safety latch. See Figure D-1.

WARNING

DO NOT WRAP THE WINCH WIRE ROPE AROUND THE LOAD. THIS WILL DAMAGE AND WEAKEN THE WIRE ROPE, MAKING IT EXTREMELY DANGEROUS.

By pressing the control switch in the UP position, lift the load slightly off the ground to test the load and effect on the outriggers and vehicle. If there are no indications of problems, the load can be lifted to the desired height by continuing to press UP. When the load is at the desired height, swing the crane slowly over the desired position.

To lower the load, press the switch DOWN, making certain there are no obstructions under the load. Release tension on the hook/sling and remove the sling from the hook, being careful not to let it swing out of control.

4-5. STORING THE CRANE

Before leaving the job site, it is necessary to store the crane. Retract the extension boom by removing the pin in the lower boom and positioning the extension boom in its fully retracted position. Insert the locking pin.

On short base models, the boom tip should be lowered to the deck and secured in that position. Tall masts provide a pin hole for storage of the boom at a -90° position. Remove the boom angle locking pin and gently lower the boom to a verticle position. Insert the pin as shown in Figure D-4.

Attach the hook to the hook hanger bracket as shown in Figure D-3. Be certain the winch cable is drawn up firmly and that all loose objects are stored before driving the carrier vehicle.

Disconnect the remote control handle cable and store in the truck cab or other suitable, secure location.

WARNING

NEVER DRIVE THE VEHICLE UNLESS THE CRANE IS IN THE STORED POSITION AND SECURED PROPERLY.

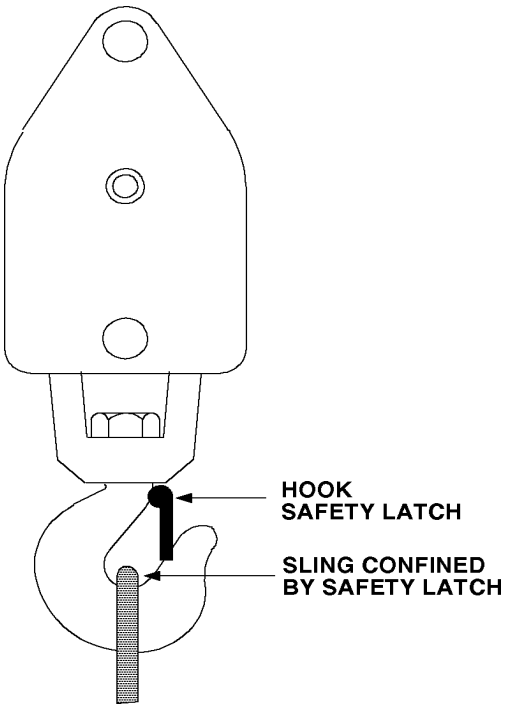


Figure D-1. HOOK SAFETY LATCH

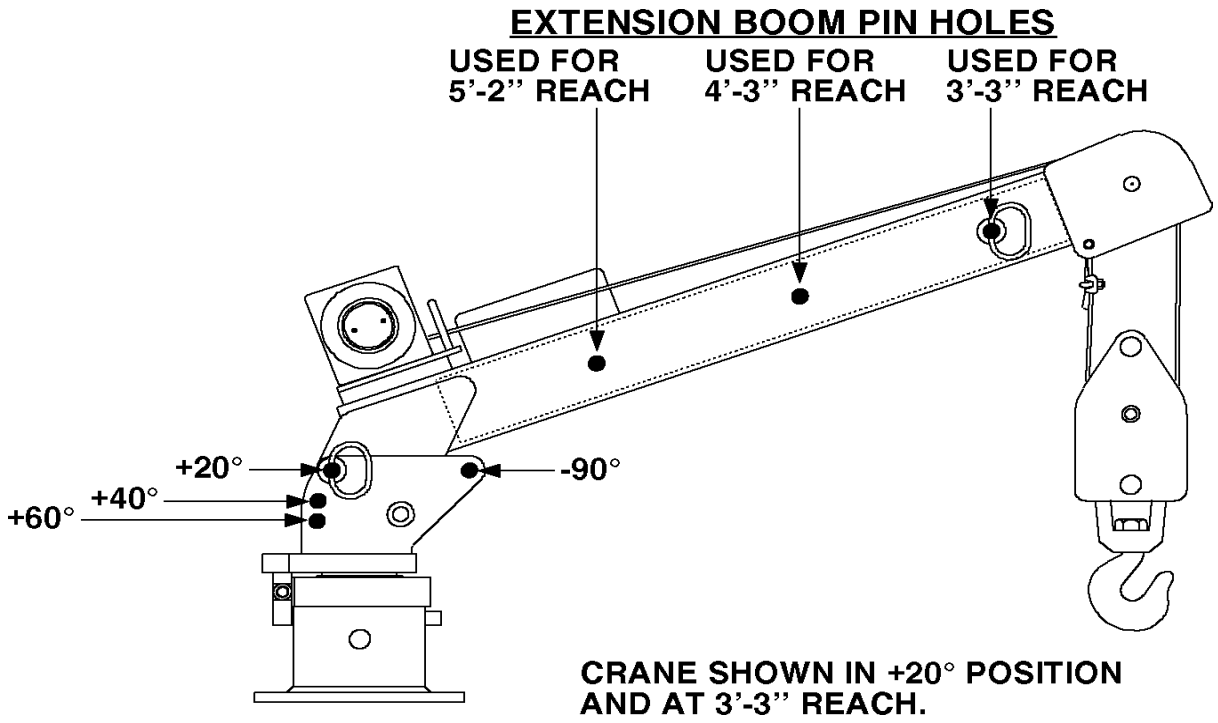


Figure D-2. BOOM POSITIONING DIAGRAM-5' VERSION

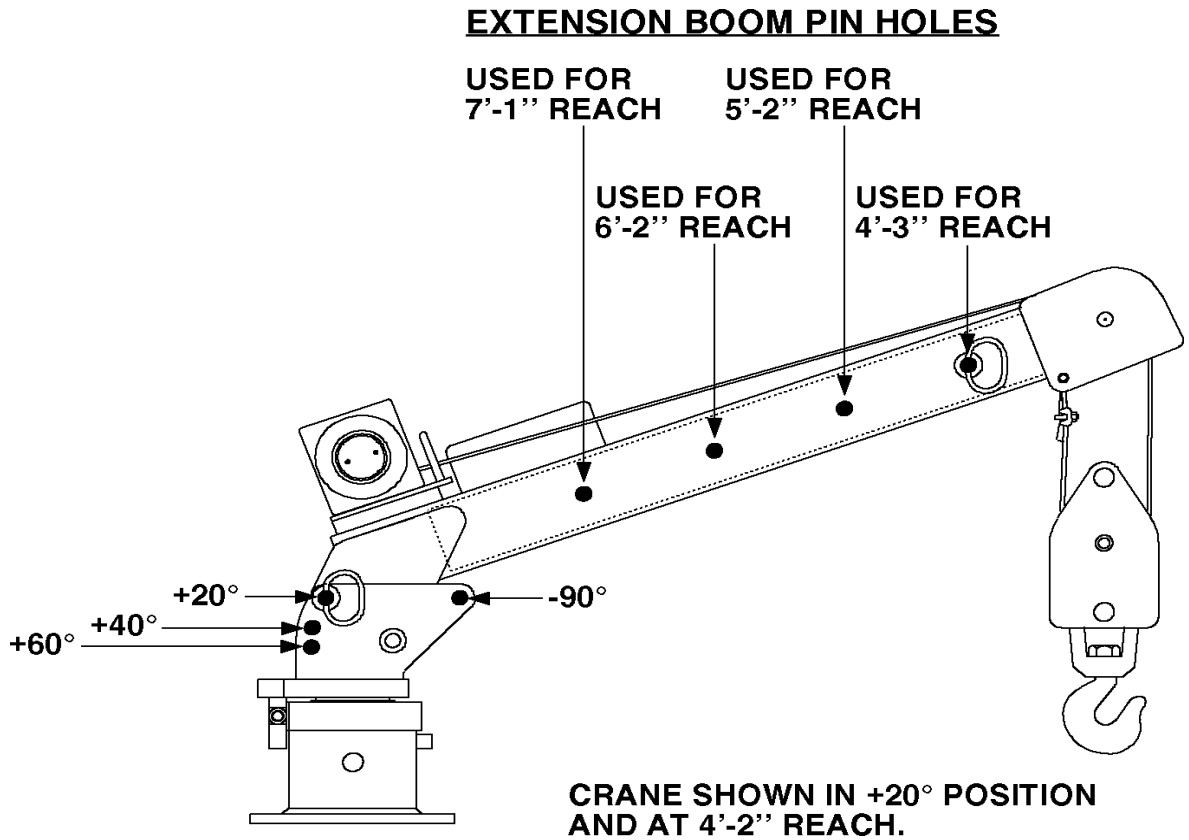


Figure D-3. BOOM POSITIONING DIAGRAM-7' VERSION

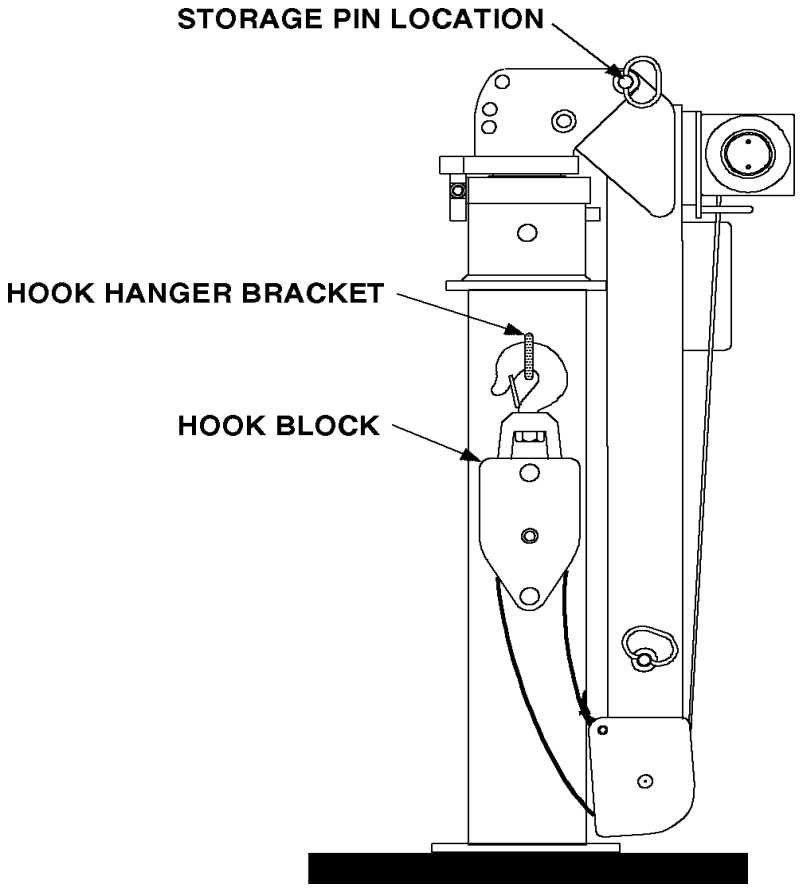


Figure D-4. STORED POSITION-TALL BASE MODELS

Section 5. PARTS

5-1. GENERAL

This section contains the parts drawings and accompanying parts lists for the assemblies used on the crane. These drawings are intended to be used for parts identification and as an aid in ordering parts.

5-2. CRANE IDENTIFICATION

Every IMT crane has an identification placard (Figure E-1) attached to the crane in a prominent location. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model number. Inquiries should be directed to:

Iowa Mold Tooling Co., Inc.
Box 189, Garner, Iowa 50438-0189
Telephone: 641-923-3711
Technical Support Fax: 641-923-2424

5-3. WELDMENT IDENTIFICATION

Each of the major weldments; base, mast, lower boom and extension boom have a part number stamped on the weldment. The location of the part numbers are shown in Figure E-2.

5-4. ORDERING REPAIR PARTS

When ordering replacement parts it is important to follow the steps as outlined below.

1. Give the model number of the unit.
2. Give the serial number of the unit.
3. Specify the complete part number.
4. Give a complete description of the part.
5. Specify the quantity required.

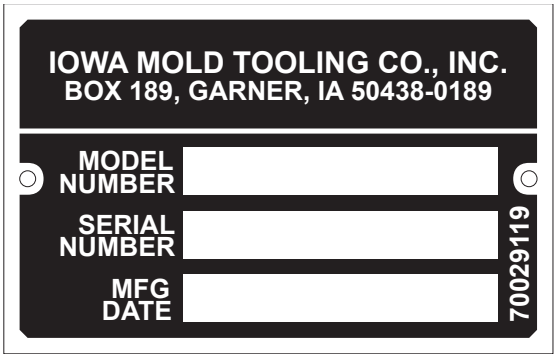


Figure E-1. SERIAL NUMBER PLACARD

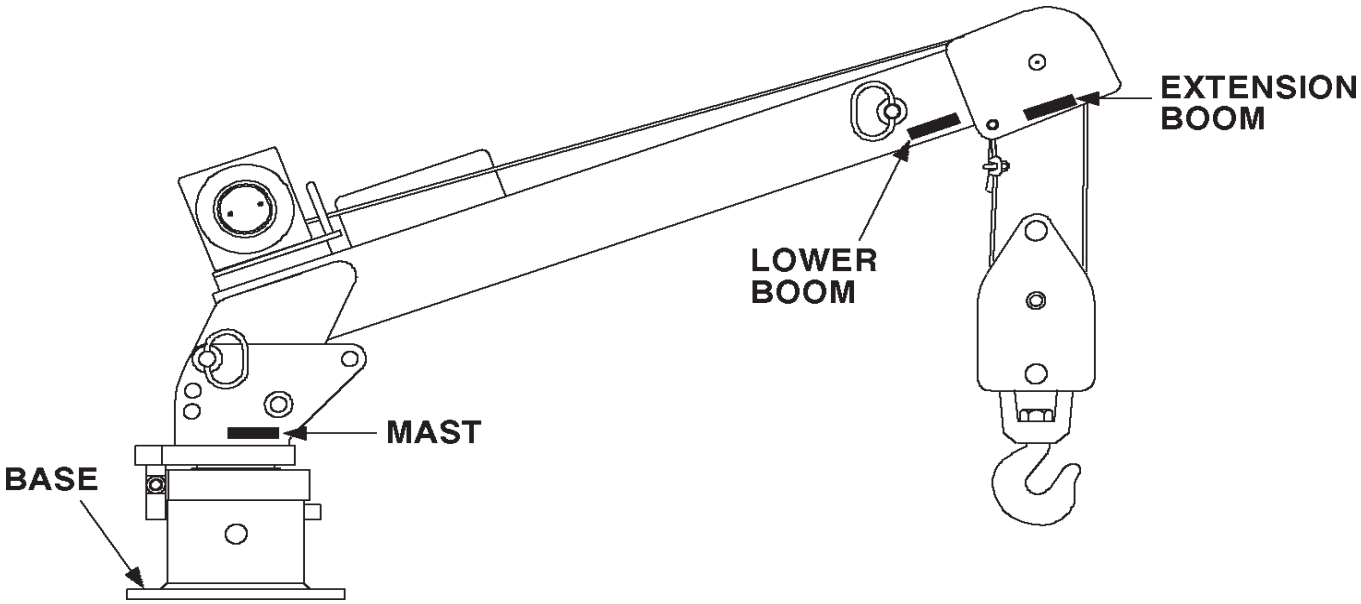
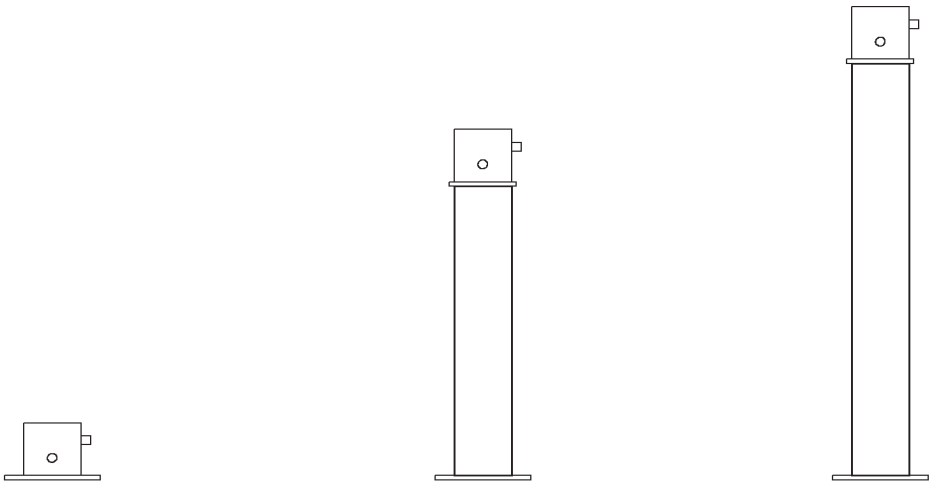


Figure E-2. WELDMENT PART NUMBER LOCATIONS

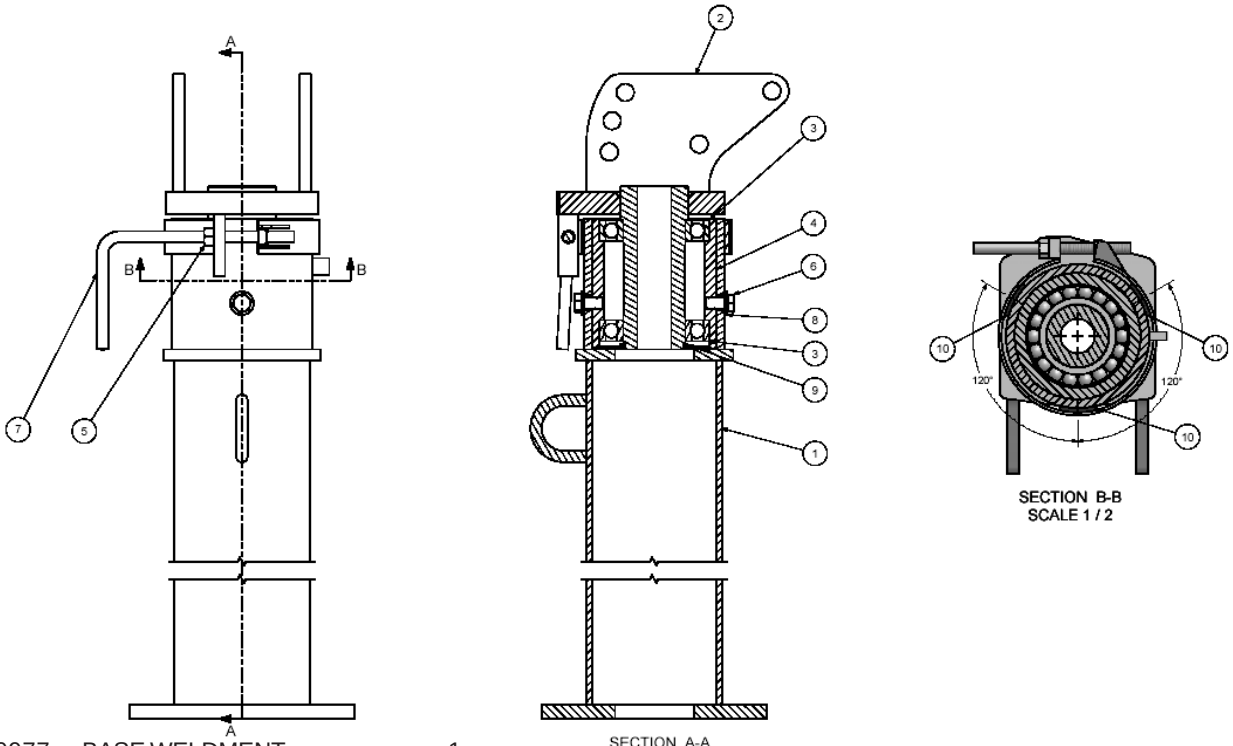


OPTIONAL SHORT BASE
USED ON 5' & 7' VERSIONS
PART NO. 52710975

STANDARD BASE
USED ON STANDARD 5' VERSION
PART NO. 52710976

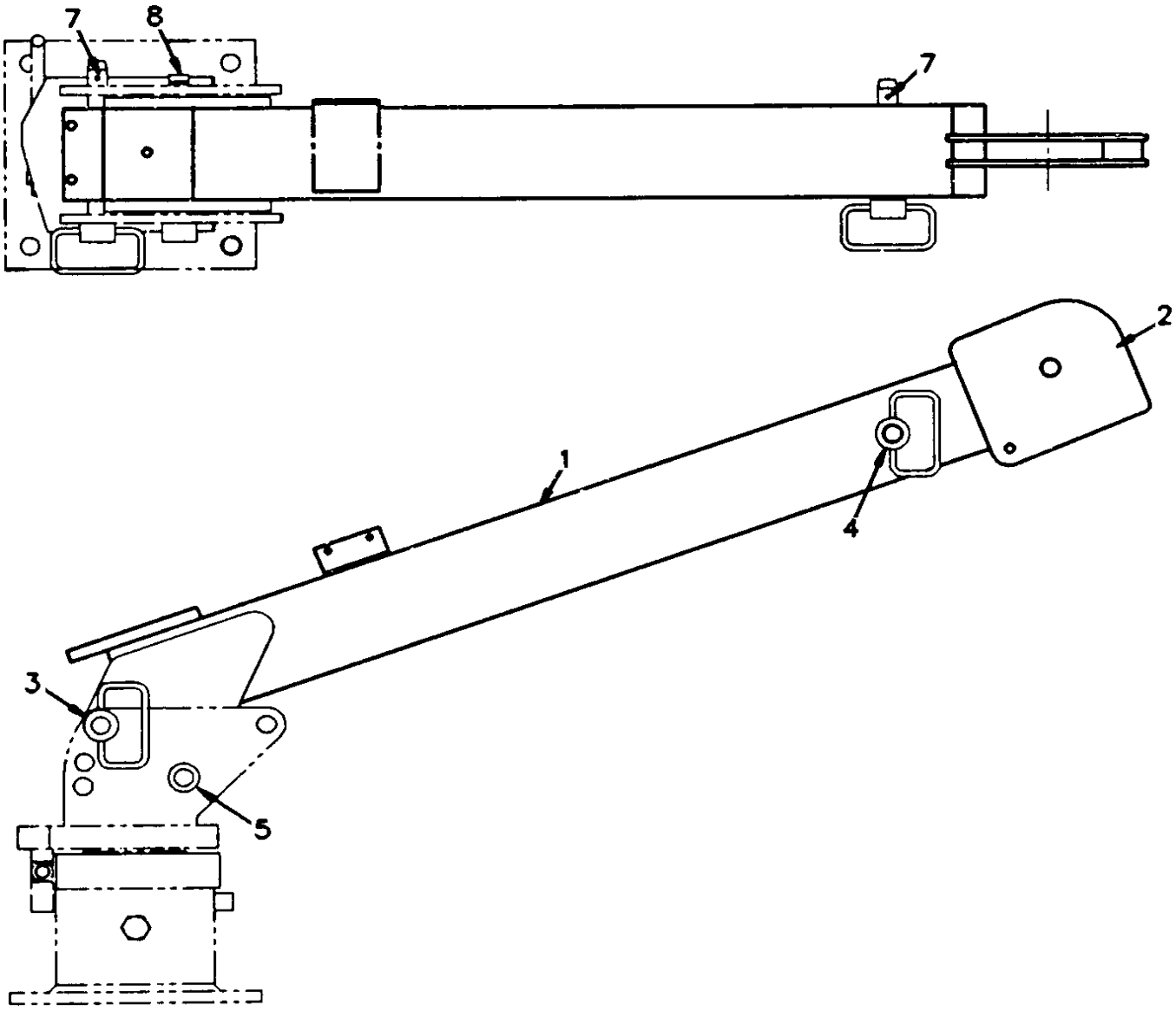
STANDARD BASE
USED ON OPTIONAL 7' VERSION
PART NO. 52710977

Figure E-3. BASE WELDMENTS



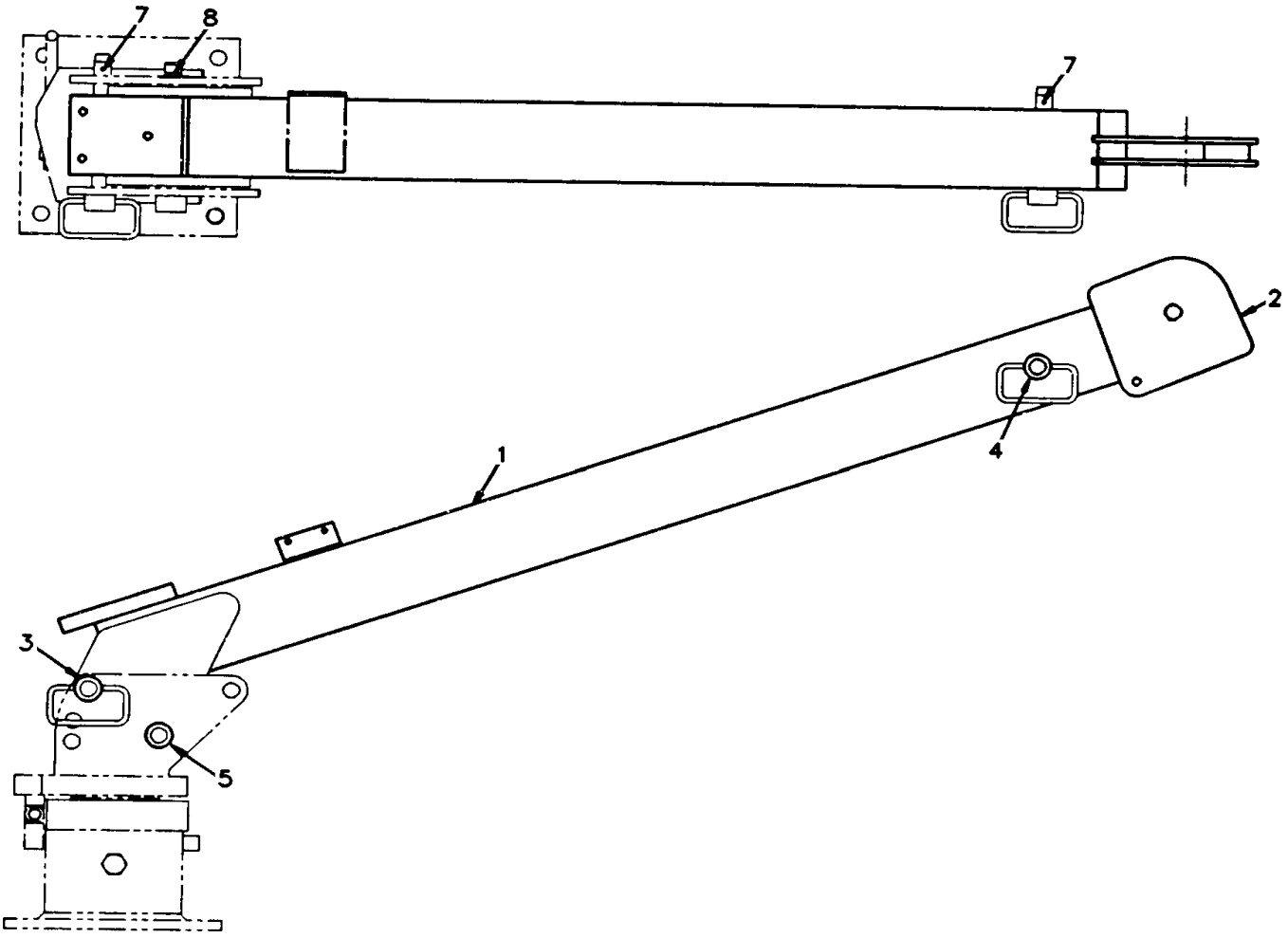
1.	52710977	BASE WELDMENT	1
2.	52710973	MAST WELDMENT	1
3.	70055247	BEARING-BALL	2
4.	60116387	SPACER-BEARING	1
5.	72062004	NUT .50-13 HEX	1
6.	72060091	CAP SCR .50-13X 1.00 HHGR5Z	2
7.	60116683	BOLT-ANCHOR .50-13X 8.00	1
8.	72063132	WASHER .50 FLAT ASTM F436	2
9.	72066106	RETAINING RING-EXT 2.75 STD	1
10.	60125865	BRAKE-LINING 1.5" x 1.5" x .188"	3

Figure E-4. MAST ASM-5' & 7' VERSION (41710972)



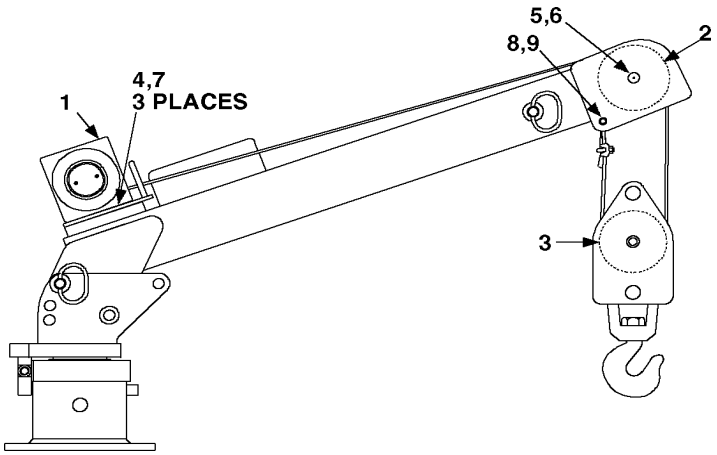
ITEM	PART NUMBER	DESCRIPTION	QTY
1.	52710978	LOWER BOOM	1
2.	52710971	EXTENSION BOOM	1
3.	70144211	PIN 3/4X6-1/4 (INCL: 7)	1
4.	70144209	PIN 3/4X4-1/4 (INCL:7)	1
5.	70144234	PIN 3/4X6-1/4	1
7.	72066143	HAIR PIN 1/8 (PART OF 3&4)	2REF
8.	72066679	ROLL PIN 5/32X1-3/8	1

Figure E-5. LOWER BOOM ASM-5' VERSION (41711029)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	52710979	LOWER BOOM	1
2.	52710970	EXTENSION BOOM	1
3.	70144211	PIN 3/4X6-1/4 (INCL: 7)	1
4.	70144209	PIN 3/4X4-1/4 (INCL:7)	1
5.	70144234	PIN 3/4X6-1/4	1
7.	72066143	HAIR PIN 1/8 (PART OF 3&4)	2REF
8.	72066679	ROLL PIN 5/32X1-3/8	1

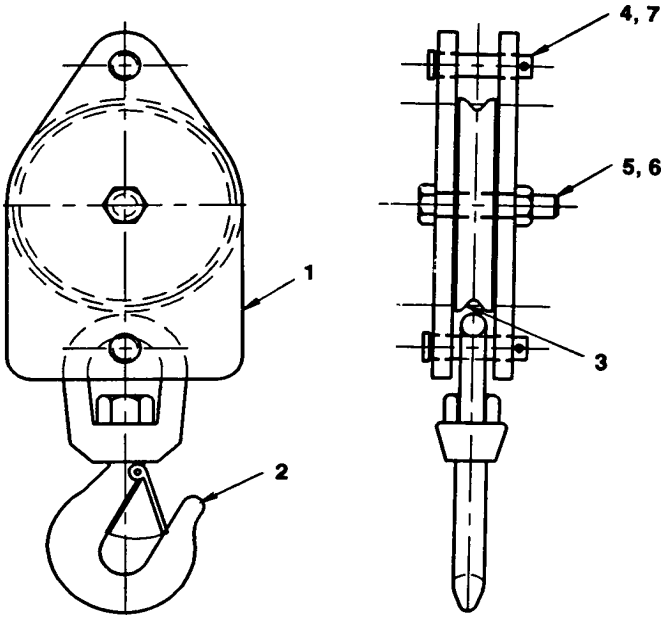
Figure E-6. LOWER BOOM ASM-7' VERSION (41711028)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	71570133	WINCH-ELECTRIC	1
2.	70056480	SHEAVE 5"PD	1
3.	51711010	HOOK BLOCK ASSEMBLY	1
4.	72060046	CAP SCR 3/8-16X1 HHGR5	3
5.	72060096	CAP SCR 1/2-13X2-1/2 HHGR5	1
6.	72062080	NUT 1/2-13 HEX LOCK	1
7.	72063003	WASHER 3/8 WRT	3
8.	72661421	CLEVIS PIN 1/2X2	1
9.	72066143	HAIR PIN 1/8	1

NOTE:
1. THE WINCH IS SUPPLIED WITH 25 FT OF 3/16" DIA GALVANIZED 7X19 AIRCRAFT CABLE WITH SWAGED THIMBLE.

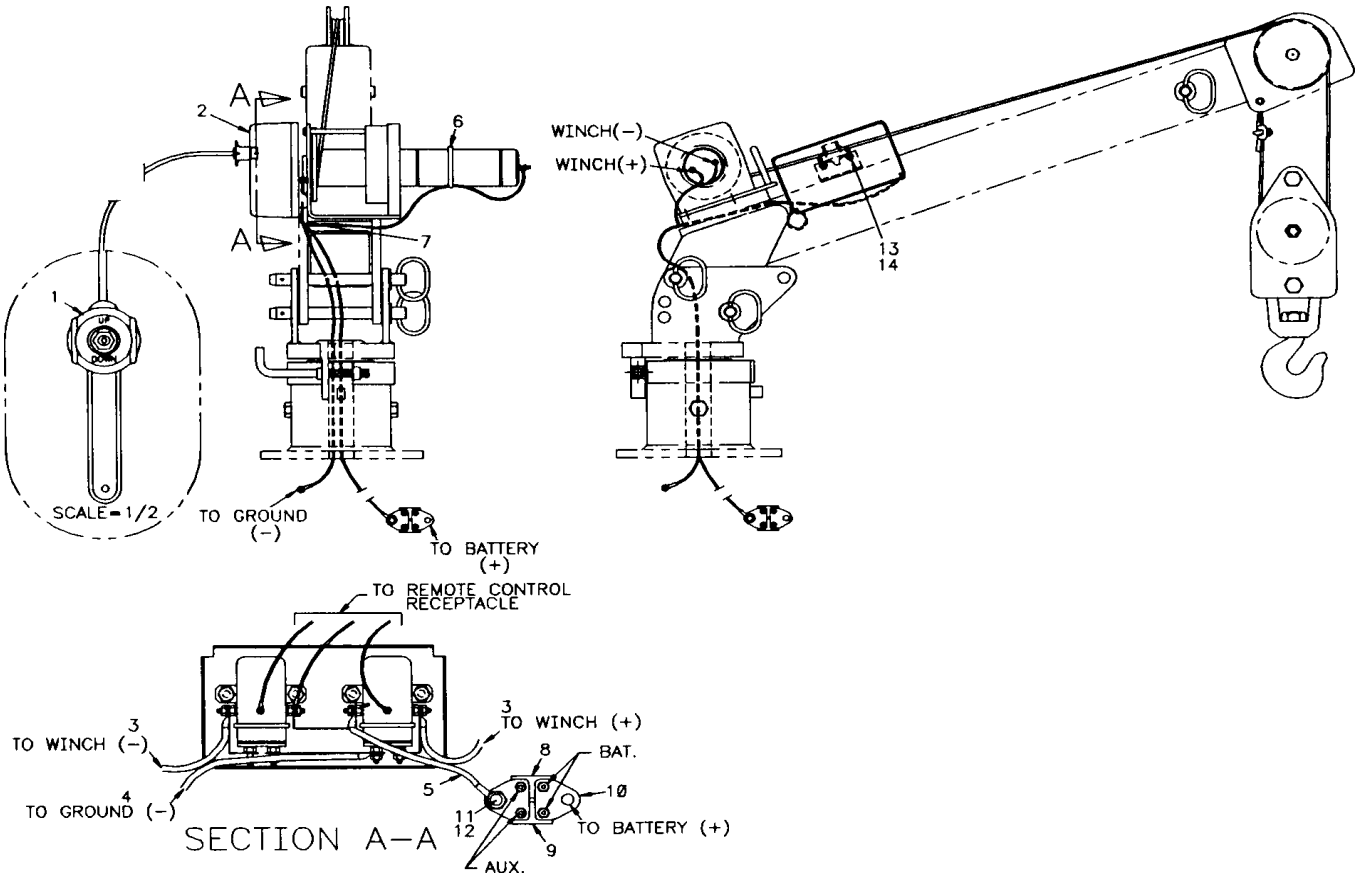
Figure E-7. WINCH ASM (31711022)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	60116446	SIDE PLATE	2
2.	71732760	HOOK 1.5TON SWIVEL	1
3.	70056480	SHEAVE 5"	1
4.	72066143	HAIR PIN 1/8	2
5.	72060928	CAP SCR 1/2-13X2-1/4 HH GR5	1
6.	72062080	NUT 1/2-13 HEX LOCK	1
7.	72661421	CLEVIS PIN 1/2X2	2

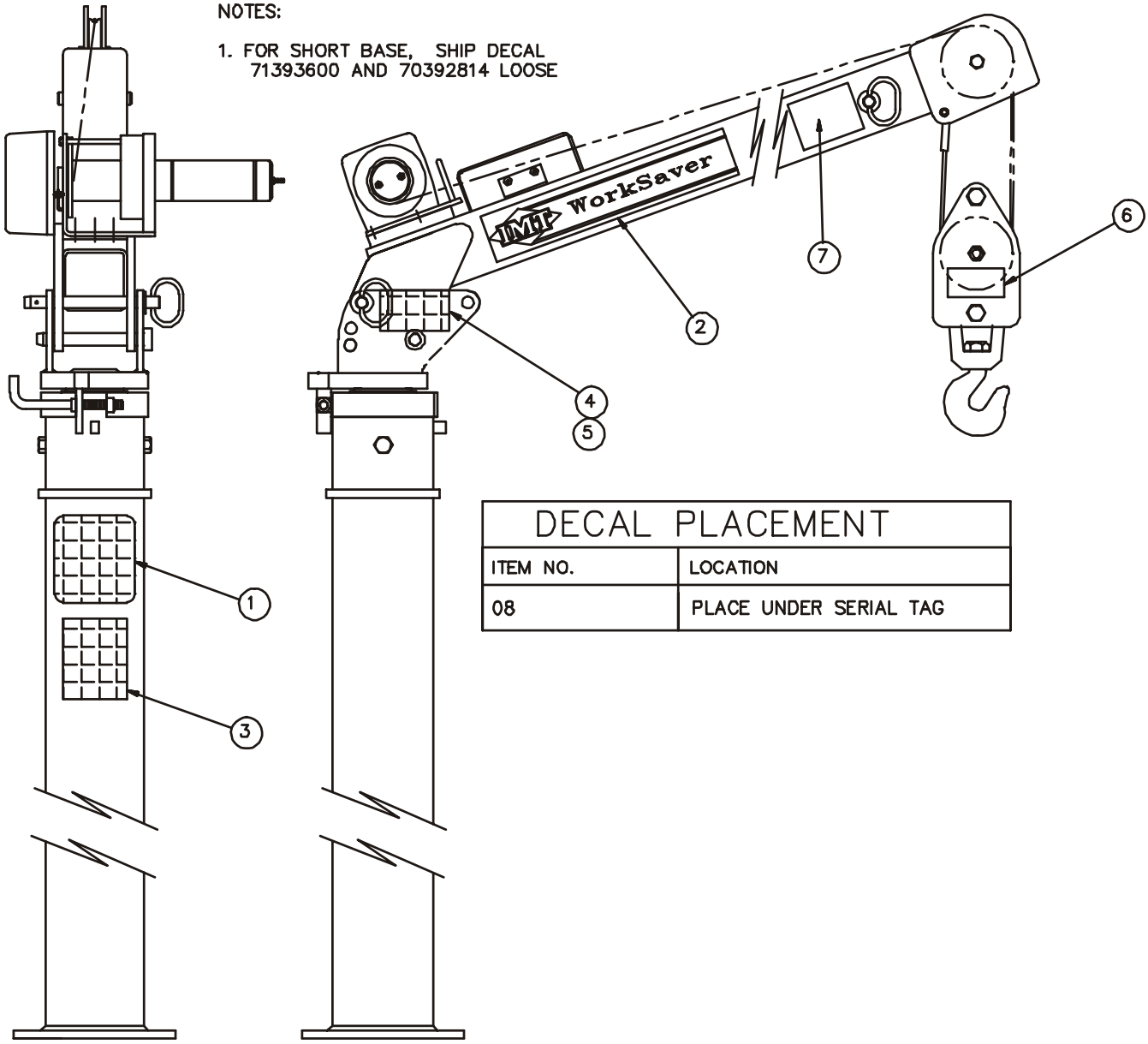
NOTE:
1. TIGHTEN THIS CAP SCREW AND NUT TO APPROXIMATELY .06" PLAY. THE SHEAVE MUST BE FREE TO ROTATE.

Figure E-8. HOOK BLOCK ASM (51711010)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	77041461	REMOTE CONTROL HANDLE	1
2.	77041460	CONTROL BOX ASSEMBLY	1
3.	51711025	CABLE ASSEMBLY	2
4.	51711024	CABLE ASSEMBLY	1
5.	51711023	CABLE ASSEMBLY	1
6.	70034069	PLASTIC TIE 14"	1
7.	70034060	PLASTIC TIE 6-3/4"	1
8.	77041357	CIRCUIT BREAKER 30AMP	1
9.	77041320	CIRCUIT BREAKER 40AMP	1
10.	70144821	CIR BRKR MTG BRKT	2
11.	72062103	NUT 3/8-16 LOCK	1
12.	72060044	CAP SCR 3/8-16X3/4 HH	1
13.	72062104	NUT 1/4-20 LOCK	2
14.	72060004	CAP SCR 1/4-20X1 HHGR5	2

Figure E-9. ELECTRICAL ASM-MNL SWING (41711170)

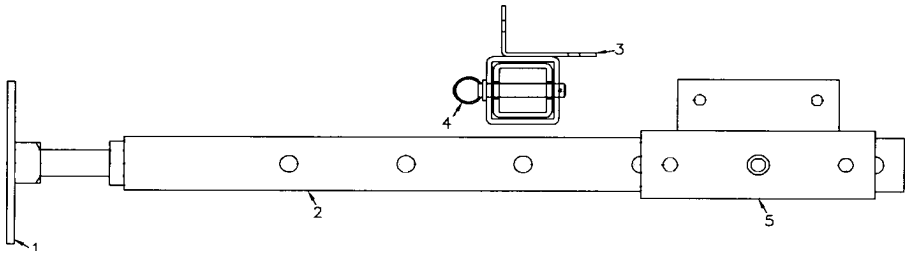


DECAL PLACEMENT	
ITEM NO.	LOCATION
08	PLACE UNDER SERIAL TAG

ITEM	PART NO.	DESCRIPTION	QTY
1.	71393600	CAPACITY PLACARD	1
2.	70393645	DECAL-WORKSAVER	2
3.	70392814	DECAL-DANGER OPERATOR	1
4.	70029119	SERIAL NUMBER PLACARD	1
5.	72066340	RIVET	2
6.	71394083	DECAL-LOAD BLK RATING 2.0T	2
7.	70394443	DECAL-DGR FREEFALL BOOM	1
8.	70395324	DECAL-ASME/ANSI B30.5	1

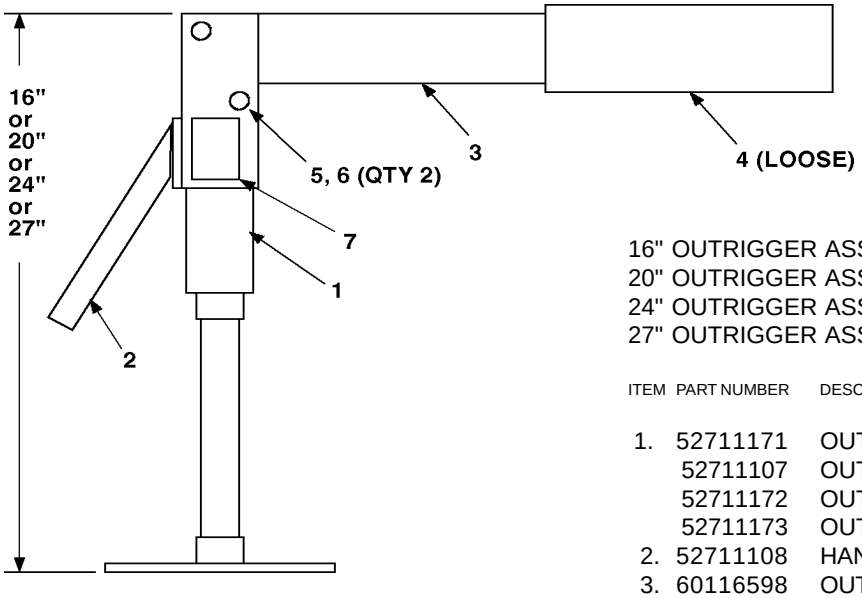
NOTE:
SHIP DECALS 71393600 & 70392814 LOOSE FOR SHORT BASE MODELS.

Figure E-10. DECAL KIT (95711049)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	52711032	OUTRIGGER PAD	1
2.	52711030	DROP LEG OUTRIGGER	1
3.	52711031	OUTRIGGER HOUSING	1
4.	71731711	PIN 1/2X2-1/2 QUICK RELEASE	1
5.	70392864	DECAL-DGR STAND CLEAR	1
6.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	4
7.	72062103	NUT 3/8-16 LOCK	4
8.	72063003	WASHER 3/8 WRT	8

Figure E-11. OUTRIGGER ASM-DROP LEG (41711109)



16" OUTRIGGER ASSEMBLY (41711174)
20" OUTRIGGER ASSEMBLY (41711106)
24" OUTRIGGER ASSEMBLY (41711175)
27" OUTRIGGER ASSEMBLY (41711176)

ITEM	PART NUMBER	DESCRIPTION	16" QTY	20" QTY	24" QTY	27" QTY
1.	52711171	OUTRIGGER WELDMENT 16"	1			
	52711107	OUTRIGGER WELDMENT 20"		1		
	52711172	OUTRIGGER WELDMENT 24"			1	
	52711173	OUTRIGGER WELDMENT 27"				1
2.	52711108	HANDLE WELDMENT	1	1	1	1
3.	60116598	OUTRIGGER TUBE	1	1	1	1
4.	60116602	OUTRIGGER TUBE	1	1	1	1
5.	72060054	CAP SCR 3/8-16X3 HH GR5	2	2	2	2
6.	72062103	NUT 3/8-16 HEX LOCK	2	2	2	2
7.	70392864	DECAL-DANGER STAND CLR	1	1	1	1

Figure E-12. OUTRIGGER ASMS

Section 6. MAINTENANCE

6-1. GENERAL

The WorkSaver™ 65 is easy to maintain but to provide for maximum service life from this unit, a program of periodic checks and maintenance are necessary. This section describes lubrication requirements and general maintenance procedures. See Figure F-1 for a graphic representation.

6-2. LUBRICATION

Lubrication is critical to the protection of your crane. It provides for smooth operation and protection from corrosion/rust. Following are the areas which will require periodic lubrication.

ROTATION BEARINGS:

The two rotation bearings in the base were lubricated at assembly. If the crane becomes difficult to rotate or becomes noisy, inspect the bearings and grease if necessary.

STANDARD ROTATION LOCKING HANDLE THREADS:

Apply a light lubricant weekly to the threads to provide for ease of operation and rust prevention. Do not over lubricate or get oil on the handle which could cause the operator to loose his grip on the handle.

EXTENSION BOOM:

Lightly grease the sides of the extension boom to provide for easy withdrawal from the lower boom when adjusting crane reach. An extension boom which is difficult to slide in and out can be hazardous.

WIRE ROPE:

Wire rope is lubricated during its manufacture but this lubrication will not protect the rope for its service life. It is necessary to lubricate wire rope in order to prevent corrosion, friction created heat and to extend its life.

Lubricate the wire rope as follows:

1. Clean the rope of dirt, dust and any other foreign matter.

2. Apply a light lubricant which will penetrate the strands of the rope. Apply by dropping on, spraying on or bushing on.

3. Apply lubricant heavily to portions which encounter bending such as at the sheave and winch.

6-3. WIRE ROPE REPLACEMENT

Replace the entire wire rope when any of the following conditions exist:

1. When there are either 3 broken strands or a total of six broken wires in all strands in any rope lay.

2. When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.

3. When there is a decrease of diameter indicating a core failure.

4. When kinking, crushing, birdcaging or other distortion occurs.

5. When there is noticable heat damage (discoloration) of the rope by any means.

6. When the diameter is reduced from nominal size by 1/32" or more.

7. If a broken wire protrudes or loops out from the core of the rope.

See the IMT Operator's Crane Safety Manual for more information concerning wire rope.

6-4. CRANE ELECTRICAL

Inspect the winch motor and control box for secure electrical contacts and the presence of moisture. Loose contacts should be tightened and moisture should be removed to help eliminate corrosion.

Make certain that good contact is maintained at the chassis ground wire connection. If severely rusted or corroded, disassemble, clean and reassemble.

Replace any severely crimped, broken or frayed electrical wires.

6-5. VEHICLE ELECTRICAL

The vehicle's battery must be maintained and fully charged in order to provide maximum efficiency. A program of regular inspection and maintenance of the battery will help to assure a reliable power source for the crane's electrical requirements. Following is a battery maintenance checklist:

ELECTROLYTE LEVEL:

Keep the battery filled to its recommended level. If low, fill with distilled water to its recommended level.

BATTERY:

Clean all corrosion from the terminals and apply a light coating of petroleum jelly to the terminals when re-connecting.

Keep the exterior of the battery clean.

CABLE CONNECTIONS:

Remove all corrosion, sand the inside of clamps to provide maximum electrical contact and firmly tighten without damaging the battery posts.

ALTERNATOR:

Check for proper operation and repair or replace if deficient.

ALTERNATOR BELT:

Check for tightness per vehicle specification and adjust if out of specification. Also, check for cracking and replace if found to be excessively cracked.

Extremely cold conditions put extra strain on the vehicle's electrical system. Battery/electrical maintenance is extremely important when temperatures fall below 0°F.

Consult your vehicle owner's manual for specific information concerning your vehicle and its recommended maintenance procedures.

6-6. CLEANLINESS

Keep the crane clean, and the decals legible to the operator, especially the capacity placard and warning decals. Cleanliness will make inspection and maintenance easier. Also, the application of wax to the crane will help protect and prolong the life of the unit.

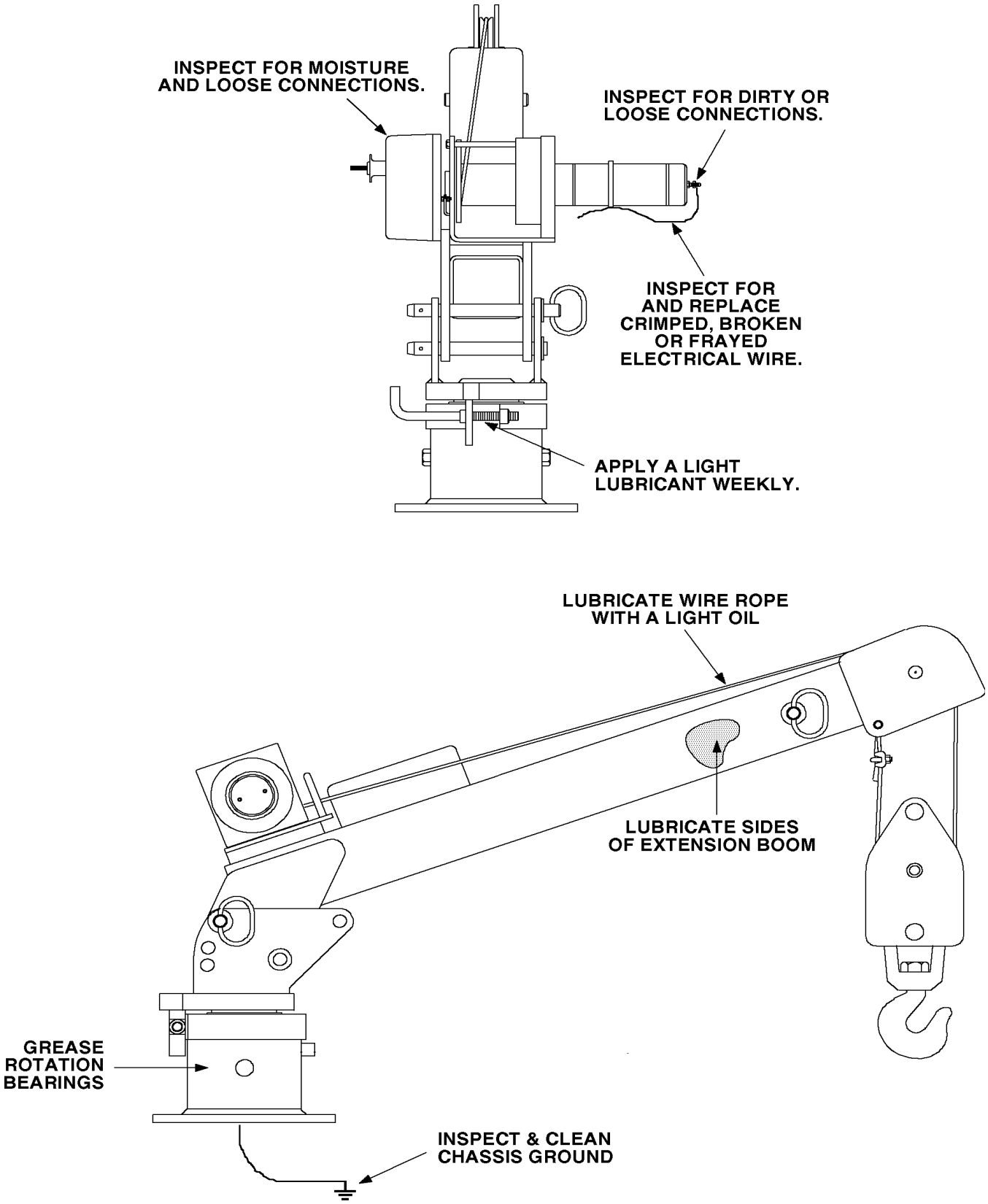

INSPECT FOR MOISTURE AND LOOSE CONNECTIONS.
INSPECT FOR DIRTY OR LOOSE CONNECTIONS.
INSPECT FOR AND REPLACE CRIMPED, BROKEN OR FRAYED ELECTRICAL WIRE.
APPLY A LIGHT LUBRICANT WEEKLY.
LUBRICATE WIRE ROPE WITH A LIGHT OIL
LUBRICATE SIDES OF EXTENSION BOOM
GREASE ROTATION BEARINGS
INSPECT & CLEAN CHASSIS GROUND

Figure F-1. MAINTENANCE POINTS

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.3750	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5000	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.6250	170	130	240	180
3/4-16	0.7500	300	225	420	315
7/8-11	0.8750	445	325	670	500
1-12	1.0000	645	485	995	745
1 1/8-12	1.1250	890	670	1445	1085
1 1/4-12	1.2500	1240	930	2010	1510
1-3/8-12	1.3750	1675	1255	2710	2035
1 1/2-12	1.5000	2195	1645	3560	2670

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
5/16-18	0.3125	17	13	25	18
3/8-16	0.3750	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5000	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.6250	150	115	220	160
3/4-10	0.7500	265	200	375	280
7/8-9	0.8750	395	295	605	455
1-8	1.0000	590	445	910	680
1 1/8-7	1.1250	795	595	1290	965
1 1/4-7	1.2500	1120	840	1815	1360
1-3/8-6	1.3750	1470	1100	2380	1780
1 1/2-6	1.5000	1950	1460	3160	2370

When using the torque data in the charts above, the following rules should be observed.

1. Bolt manufacturer's particular specifications should be consulted when provided.

2. Flat washers of equal strength must be used.

3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.

4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, collodial copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatique causing serious injury or DEATH.

Figure F-2. TORQUE DATA CHART

The information within this manual has been compiled and checked but errors do occur. To provide our customers with a method of communicating those errors we have provided the Manual Change Request form below. In addition to error reporting, you are encouraged to suggest changes or additions to the manual which would be of benefit to you. We cannot guarantee that these additions will be made but we do promise to consider them. When completing the form, please write or print clearly. Submit a copy of the completed form to the address listed below.

MANUAL CHANGE REQUEST

DATE	PRODUCT MANUAL	MANUAL PART NO.
SUBMITTED BY		
COMPANY		
ADDRESS		
CITY, STATE, ZIP		
TELEPHONE		

☐ ERROR FOUND

LOCATION OF ERROR (page no.): _____

DESCRIPTION OF ERROR: _____

_____

_____

_____

_____

_____

_____

_____

☐ REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

_____

_____

_____

REASON FOR ADDITION: _____

_____

_____

_____

MAIL TO: IOWA MOLD TOOLING Co., Inc.
Box 189,
Garner IA 50438-0189
ATTN: Technical Publications

LIMITED WARRANTY

WARRANTY COVERAGE - Products manufactured by Iowa Mold Tooling Co., Inc. (IMT) are warranted to be free from defects in material and workmanship, under proper use, application and maintenance in accordance with IMT's written recommendations, instructions and specifications as follows:

1. Ninety (90) days; labor on IMT workmanship from the date of shipment to the end user.

2. One (1) year; original IMT parts from the date of shipment to the end user.

IMT's obligation under this warranty is limited to, and the sole remedy for any such defect shall be the repair or replacement (at IMT's option) of unaltered parts returned to IMT, freight prepaid, and proven to have such defect, provided such defect occurs within the above stated warranty period and is reported within fourteen (14) days of its occurence.

IMPLIED WARRANTY EXCLUDED - This is the only authorized IMT warranty and is in lieu of all other express or implied warranties or representations, including any implied warranties of merchantability or fitness for any particular purpose or of any other obligations on the part of IMT.

ITEMS EXCLUDED - The manufacturer gives no warranty on any components purchased by the manufacturer, and such components as are covered only by the warranties of their respective manufacturers.

WARRANTY CLAIMS - Warranty claims must be submitted and shall be processed in accordance with IMT's established warranty claim procedure.

WARRANTY SERVICE - Warranty service will be performed by any IMT distributor authorized to sell new IMT products of the type involved or by any IMT Service Center authorized to service the type of product involved or by IMT in the event of direct sales made by IMT. At the time of requesting warranty service, the purchaser must present evidence of the date of delivery of the product. The purchaser shall pay any premium for overtime labor requested by the purchaser, any charge for making service calls and for transporting the equipment to the place where warranty work is performed.

WARRANTY VOIDED - All obligations of IMT under this warranty shall be terminated:(1) if service other than normal maintenance or normal replacement of service items is performed by someone other than an authorized IMT dealer, (2) if product is modified or altered in ways not approved by IMT.

PURCHASER'S RESPONSIBILITY - This warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper protection in storage, or improper use. The purchaser has the obligation of performing the care and maintenance duties discussed in IMT's written recommendations, instructions and specifications. Any damage which results because of purchaser's failure to perform such duties shall not be covered by this warranty. The cost of normal maintenance and normal replacement of service items such as filters, belts, etc. shall be paid by the purchaser.

CONSEQUENTIAL DAMAGES - The only remedies the purchaser has in connection with the breach or performance of any warranty on IMT products are those set forth above. In no event will the dealer, IMT or any company affiliated with IMT, be liable for business interruptions, loss of sales and/or profits, rental or substitute equipment, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

REPRESENTATIONS EXCLUDED - IMT products are subject to no expressed, implied or statutory warranty other than herein set forth, and no agent, representative or distributor of the manufacturer has any authority to alter the terms of this warranty in any way whatsoever or to make any representations or promises, express or implied, as to the quality or performance of IMT products other than those set forth above.

CHANGE IN DESIGN - IMT reserves the right to make changes in design or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

Effective January, 1985

This parts manual is provided to the user to assist in servicing the equipment. It is the propertyof Iowa Mold Tooling Co., Inc and, as such, may not be reproduced either whole or in part,whether by chemical, electrostatic, mechanical or photographic means without the expressedwritten permission of an officer of Iowa Mold Tooling Co., Inc. One manual is provided with each piece of new equipment and additional manuals may be obtained at a nominal price.

IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711
TECHNICAL SUPPORT FAX: 641-923-2424